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SECURITY INFORMATION

INTELLIGENCE MEMORANDUM

PRODUCTION AND UTILIZATION OF SUGAR
IN THE SOVIET BLOC
1952

CIA/RR IM-376

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WARNING

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SECURITY INFORMATION

PRODUCTION AND UTILIZATION OF SUGAR IN THE SOVIET BLOC*
1952

Summary

The Soviet Bloc accounts for 12 to 15 percent of the world sugar supply and is second in importance only to Cuba as a producer of sugar. Roughly 70 percent of the sugar produced in the Soviet Bloc comes from the Ukraine and the European Satellites. Sugar production in the Soviet Bloc has steadily increased since World War II, reaching a high of about 5.4 million metric tons of raw sugar** in 1951 but dropping in 1952 approximately 15 percent below the 1951 total because of adverse weather conditions in the European Satellites. The total 1952 production was estimated at about 4.6 million metric tons as compared with the 4.8 million tons before the war. All Soviet Bloc sugar, with the exception of cane sugar from Communist China, is produced from sugar beets. Sugar-beet acreage in 1952, which remained almost the same as in 1951, is 14 percent above the prewar level.*** Sugar yields for the Bloc, however, are still below the prewar level.****

The USSR, which accounted for about 50 percent of the total Soviet Bloc production of sugar in 1952, produced about 2.3 million

* This memorandum contains information available as of 1 April 1953. The data do not represent weighted quantities but are estimates and approximations. The range of error in the estimates is at least plus or minus 10 percent.

** Estimates of production given in this memorandum are in terms of raw sugar, based on a ratio of raw to refined sugar of 1.1 to 1. Raw sugar is sugar processed from sugar beets or sugar cane but not yet refined. Estimates of utilization are in terms of refined sugar.

*** All acreage figures in this memorandum are for harvested acreage.

**** The term sugar yield indicates the quantity of raw sugar which was processed from 1 hectare of sugar beets or sugar cane. Such variations as sugar content, which may differ from year to year and from country to country, are reflected in the yield figure.

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metric tons, a 10-percent increase above the 1951 level and a 28-percent increase above the prewar level. The European Satellites, which accounted for 42 percent of the total Soviet Bloc production of sugar in 1952, produced about 1.9 million metric tons of sugar, a 34-percent decrease below the 1951 level and a 27-percent decrease below the prewar level. Communist China, which accounted for only 8 percent of the total Soviet Bloc production of sugar in 1952, produced approximately 375,000 metric tons, which was a 15-percent increase over the 1951 level but 6 percent below the prewar level.

All countries producing sugar in the Soviet Bloc have plans for increasing production, but to a large extent, these production plans appear unattainable. The Soviet Fifth Five Year Plan (1951-55), for example, calls for a 78-percent increase in the production of sugar. Since no plans were given for acreage increases, the assumption is that any increase in production will result primarily from increased yields. The goal of the Fifth Five Year Plan appears to be unattainable because it would require yields of unrealistic proportions, which even under the best of conditions could not be attained in so short a period of time.

In 1952, about 83 percent of the 4.1 million metric tons (refined value)* of sugar produced in the Soviet Bloc was utilized domestically; 12 percent, or 487,500 metric tons, was exported to non-Soviet Bloc countries; and the remaining 5 percent, about 190,000 metric tons, either was available for state reserves or constituted an exportable surplus available for future commitments.

The sugar available for domestic consumption in the European Satellites is on the average less than before World War II, though it would be greater were it not for the USSR's policy of expropriating considerable quantities of the European Satellites' production under forced trade agreements and reparations and, in addition, encouraging the Satellites to export as much sugar as possible as a means of acquiring hard currency, raw materials, and industrial commodities from non-Soviet Bloc countries. In some instances, this policy has resulted in a sugar

* Utilization figures are in terms of refined value. The raw value production of 4.6 million metric tons is equal, therefore, to 4.1 million metric tons refined.

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shortage which has necessitated rationing among the general population. Only military and other preferred personnel continually receive a ration which reaches an important caloric level in the diet.

Even though sugar is a relatively perishable item requiring stringent storage conditions, it is apparent that some of the Soviet Bloc countries are retaining a portion of each year's production to be placed in a reserve for either strategic purposes or future commitments. The quantities maintained each year in the state reserve above those quantities normally held for industrial, consumer, and trade purposes are not known. In any case the sugar probably is rotated on a first-in first-out basis so as to minimize storage losses.

1. Postwar Trends in Production.

Production of sugar in the Soviet Bloc increased after World War II (1940-44) from annual production of about 4.2 million metric tons to a production of about 5.4 million metric tons in 1951. Prewar average production of sugar in those areas now constituting the Soviet Bloc totaled about 4.8 million metric tons. (See Table 1.)*

The acreage producing sugar in the Soviet Bloc increased steadily after the end of World War II and was estimated at 2.4 million hectares at the beginning of 1951, approximately a 20-percent increase over the prewar acreage of 2.0 million hectares. (See Table 1.) With the exception of production from sugar cane in Communist China, Soviet Bloc sugar is produced from sugar beets.

Although production of sugar has increased since World War II, the yields for the Soviet Bloc as a whole are still below prewar yields. Increased acreages have accounted for the gain in production. Yields for the Bloc in 1951 averaged 21.9 centners of raw sugar per hectare as compared to the prewar yield of 22.7 centners per hectare. Sugar yields remained high during World War II but began to drop soon after the war as a result of fertilizer shortages throughout the Bloc and of an opposition to the land reform program in some of the European Satellites.

* Table 1 follows on p. 4.

Table 1
Acreage of Sugar Beets, Yields, and Production of Raw Sugar in the Soviet Bloc
Prewar as Compared with 1951 and 1952

Country	Prewar			1951			1952 a/		
	Hectares	Yields (Centners per Hectare)	Production (Metric Tons)	Hectares	Yields (Centners per Hectare)	Production (Metric Tons)	Hectares	Yields (Centners per Hectare)	Production (Metric Tons)
USSR	1,288.5 b/	13.5	1,745.9	1,335.5	15.6	2,086.5	1,335.5	17.0	2,267.0
European Satellites									
Poland	209.6 c/	42.0	879.9	286.0	29.8	853.2	275.0	23.9	656.8
East Germany	167.5 c/	53.0	888.0	210.0	35.7	750.0	210.0	24.4	511.4
Czechoslovakia	155.0 c/	41.8	648.5	218.5	36.5	798.3	180.5	24.1	434.6
Hungary	42.5 c/	26.7	113.4	114.9	29.9	343.0	114.9	17.1	196.2
Rumania	31.2 c/	27.1	84.4	80.9	16.0	129.7	81.3	10.1	82.4
Bulgaria	9.3 c/	23.4	21.8	32.4	19.0	61.7	32.7	12.3	40.2
Albania	Negligible c/	Negligible	Negligible	3.5	16.9	5.9	4.0	12.0	4.8
Total European Satellites	615.1	42.9	2,636.0	946.2	31.1	2,941.8	898.4	21.4	1,926.4
Communist China d/	200.0 e/	20.0	400.0	162.5	20.0	325.0	187.5	20.0	375.0
Total Soviet Bloc	2,103.6	22.7	4,781.9	2,444.2	21.9	5,353.3	2,421.4	18.9	4,568.4

a. Preliminary estimates.

b. Postwar boundaries, 1938 only.

c. Postwar boundaries, 1935-39 average.

d. Chinese production and acreage data include both sugar cane and sugar beets.

e. Postwar boundaries, 1931-37 average.

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2. 1952 Production.

Production of sugar in the Soviet Bloc for 1952 is estimated at about 4.6 million metric tons, a decrease of approximately 0.8 million metric tons (15 percent) below the 1951 production of 5.4 million metric tons and 0.2 million metric tons (4 percent) below the prewar production of 4.8 million metric tons.

The 1952 production of sugar, distributed over a population of 782 million, indicates a gross per capita supply* of 6 kilograms, which is slightly less than 7 kilograms per capita indicated by the distribution of the 1951 production over 778 million people, although roughly equal to the average gross per capita supply of 6 kilograms available to 767 million people during the prewar years.

The 1952 sugar-beet acreage in the Soviet Bloc is estimated at 2.4 million hectares, equal to the 1951 total and 14 percent above the prewar average of 2.1 million hectares.

Yields for the Soviet Bloc in 1952 are estimated at 18.9 centners per hectare as compared with the 1951 yield of 21.9 centners per hectare and the prewar yield of 22.7 centners per hectare.

a. USSR.

Production of sugar in the USSR for 1952 is estimated at approximately 2.3 million metric tons, a 10-percent increase over the 1951 production of 2.1 million metric tons and an increase of more than 25 percent over the prewar production of 1.8 million metric tons. The 1952 sugar-beet acreage is estimated at 1.3 million hectares, approximately equal to the 1951 and prewar acreages. (See Table 1.)

It is estimated that the USSR produced about 50 percent of the total Soviet Bloc sugar production in 1952 from 55 percent of the total Soviet Bloc sugar-beet acreage.

As seen in Table 2**, sugar beets are grown throughout the USSR in varying acreages with the exception of the Northwest (Ia), Northern

* The gross per capita supply indicates the supply available per person for all purposes including industrial use, export, stockpiling, and human consumption as contrasted with the net per capita supply which indicates the supply available per capita after deducting the exports and stockpiling quantities from the gross supply.

** Table 2 follows on p.6.

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Table 2
Acreage of Sugar Beets and Production of Raw Sugar by Economic Region in the USSR
Prewar as Compared with 1951 and 1952

Economic Region	Prewar a/		1951		1952 b/			
	Hectares	Production (Thousand Metric Tons)	Hectares	Production (Thousand Metric Tons)	Hectares	Percent of Total	Production (Thousand Metric Tons)	Percent of Total
Ia Northwest								
Ib Northern European USSR								
IIa Baltic	25.0	57.6	36.4	56.3	36.4	2.7	61.2	2.7
IIb Belorussia			13.5	16.7	13.5	1.0	18.1	0.8
III Ukraine	872.6	1,178.5	792.1	1,183.0	792.1	59.3	1,285.4	56.7
IV Lower Don-North Caucasus	19.0	28.0	24.6	39.6	24.6	1.9	43.1	1.9
VI Volga	3.7	1.7	27.1	31.3	27.1	2.0	34.0	1.5
VII Central European USSR	301.1	380.6	261.5	409.0	261.5	19.6	444.4	19.6
VIII Urals (Europe)	0.8	1.7	14.7	16.7	14.7	1.1	18.1	0.8
Total European USSR	1,222.2	1,648.1	1,169.9	1,752.6	1,169.9	87.6	1,904.3	84.0
V Transcaucasus	6.5	7.0	12.6	20.9	12.6	0.9	22.7	1.0
VIII Urals (Asia)								
IX West Siberia	27.1	26.2	46.7	50.1	46.7	3.5	54.4	2.4
Xa Kazakh SSR	14.2	29.7	25.8	68.9	25.8	1.9	74.8	3.3
Xb Central Asia	14.0	29.7	73.2	187.8	73.2	5.5	204.0	9.0
XI East Siberia								
XII Far East	4.5	5.2	7.3	6.2	7.3	0.6	6.8	0.3
Total Asiatic USSR	66.3	97.8	165.6	333.9	165.6	12.4	362.7	16.0
Total USSR	1,288.5	1,745.9	1,335.5	2,086.5	1,335.5	100.0	2,267.0	100.0

a. Postwar boundaries, 1938 only.

b. Preliminary estimates.

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European USSR (Ib), that part of the Urals (VIII) which lies in Asia, and East Siberia (XI) economic regions.* The greater part of the sugar industry is located in European USSR, which in 1952 accounted for 84 percent of the total production in the USSR and 88 percent of the total sugar-beet acreage. Of these totals, the Ukraine (III) accounted for 57 percent of the production and 59 percent of the acreage and Central European USSR (VII) accounted for 20 percent of both the production and the acreage. In Asiatic USSR the largest sugar-producing area is located in Central Asia (Xb), which accounted for 9 percent of the total production and 5 percent of the total acreage in 1952. (See Table 2.)

In 1952, sugar production in the European USSR represented a 16-percent increase over prewar production, although acreage increased only 3.6 percent during that period. In the Asiatic USSR, sugar production and acreage increased 271 and 150 percent respectively over prewar, with the most significant increase taking place in Central Asia (Xb). This increase indicates the shift in acreage and production from the western to the eastern areas of the USSR following the destruction during the war of sugar factories in the Ukraine and Central USSR. In spite of this shift in acreage, the continued heavy concentration of sugar-beet acreage and processing facilities in the western areas of the USSR, particularly in the Ukraine, again places the Soviet sugar supply in a relatively more vulnerable position than most other crops in the event of another war.

Yields of raw sugar in the USSR increased to 17.0 centners per hectare in 1952, a 9-percent increase over the 1951 yield of 15.6 centners per hectare and a 26-percent increase over the prewar yield of 13.5 centners per hectare. (See Table 1.) These increases were the result primarily of the use of improved seed varieties, fertilization, and the acquisition of more favorable arable land, coupled with improved processing techniques and facilities acquired from the European Satellites under reparations.

b. European Satellites.

Production of sugar in the European Satellites in 1952 is estimated at about 1.9 million metric tons, 34 percent below the 1951 production of 2.9 million metric tons and 27 percent below the prewar production of 2.6 million metric tons. (See Table 1.) This large decrease

* The term region in this memorandum refers to the economic regions defined and numbered on CIA Map 12048, 9-51, USSR: Economic Regions.

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in production resulted from a heavy decrease in sugar-beet yields brought about by unfavorable weather conditions throughout Eastern Europe during the 1952 beet-growing season. The combination of a long summer drought and extremely cold, rainy weather during the harvesting season resulted in the worst crop since 1947.

The harvested acreage of sugar beets in 1952 was estimated at about 0.9 million hectares, which was 5 percent below the 1951 acreage of 0.95 million hectares although 50 percent above the prewar acreage of 0.6 million hectares. (See Table 1.) The decrease in the 1952 acreage below the 1951 level was caused primarily by the abandonment of that sown acreage which was destroyed by spring frosts. This was particularly true in Czechoslovakia and Poland, where 1952 acreages decreased 17 and 4 percent, respectively, below the 1951 total.

Sugar beets are cultivated throughout the European Satellites in varying degrees. Poland, East Germany, and Czechoslovakia account for the largest share of the acreage and production. (See Table 3.)*

As seen in Table 3, Hungary has shown the greatest percentage increase in relation to the other European Satellite countries as a producer of sugar. Whereas in prewar years Hungary accounted for only 4.3 percent of the production, in 1951 and 1952 it has accounted for 12.2 and 10.2 percent, respectively, of total sugar production. The large decrease from prewar production in East Germany in 1951 and 1952 as in relation to Satellite production was because important sugar-beet growing regions were transferred to Poland after the end of World War II.

The yield of raw sugar in the European Satellites during 1952 dropped to 21.4 centners per hectare, 31 percent below the 1951 yield of 31.1 centners per hectare and 50 percent below the prewar yield of 42.9 centners per hectare. (See Table 1.) These losses were caused primarily by the weather conditions mentioned above. Sugar yields for the European Satellites as a whole during the postwar period have failed to reach the prewar level. Hungary was the only country to exceed the prewar yield during the postwar period (1951). As shown in Table 1, the average sugar yield in the European Satellites is still higher than in the USSR, in spite of Soviet developments. The weather and soil conditions which prevail in the Satellites are more favorable to the growing of sugar beets, and the Satellites are more experienced in growing the crop and in developing better varieties

* Table 3 follows on p. 9.

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Table 3

Percentage Distribution of Acreage of Sugar Beets and Production of Raw Sugar in the European Satellites
 Prewar as Compared with 1951 and 1952

Country	Prewar a/		1951		1952 b/	
	Percent of Acreage	Percent of Production	Percent of Acreage	Percent of Production	Percent of Acreage	Percent of Production
Poland	34.1	33.4	30.2	29.0	30.6	34.1
East Germany	27.2	33.7	22.2	25.5	23.4	26.5
Czechoslovakia	25.2	24.6	23.1	27.1	20.1	22.6
Hungary	6.9	4.3	12.2	11.7	12.8	10.2
Rumania	5.1	3.2	8.5	4.4	9.0	4.3
Bulgaria	1.5	0.8	3.4	2.1	3.6	2.1
Albania	Negligible	Negligible	0.4	0.2	0.5	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

a. Postwar boundaries, 1935-39 average.

b. Preliminary estimates.

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suited to their weather and soil conditions. In addition, the higher extraction rate of sugar in these countries points to processing facilities and personnel superior to those in the USSR.

c. Communist China.

Production of sugar in Communist China for 1952 is estimated at about 375,000 metric tons, which represents a 15-percent increase over the 1951 production of about 325,000 metric tons, although it is 6 percent below the prewar average production of 400,000 metric tons. The acreage* in 1952 is estimated at about 187,000 hectares, which was a 15-percent increase above the 1951 acreage of 162,500 hectares, although 6 percent below the average prewar acreage of 200,000 hectares. (See Table 1.)

Communist China is estimated to produce only about 8 percent of the total Soviet Bloc production of raw sugar in 1952, from approximately 8 percent of the total acreage.

Sugar cane, which accounts for about 97 percent of the sugar produced in Communist China, is grown principally in the southeastern areas of the country, whereas only sugar beets are cultivated in Manchuria. Only about 20 percent of China's production of sugar is refined. The remainder, which is produced in native mills, is consumed in an unrefined state. Kwangtung and Szechwan provinces and Manchuria are at present the only areas in the country that have modern sugar mills. These areas and Kwangsi and Fukien provinces are the only commercially important sugar-producing areas.

Yields of raw sugar, estimated for sugar beets and sugar cane, have averaged about 20 centners per hectare during the postwar period. These yields, which are high in comparison with some of the other Soviet Bloc countries, are attributed to the higher sugar content of the cane as compared with that of beets.

3. Planned Production.

Production of sugar in the Soviet Bloc is planned to reach approximately 8.3 million metric tons by 1955,** which would result in an increase of about 55 percent over the 1951 production of 5.4 million metric tons and about 74 percent over the prewar production of 4.8

* Includes sugar-beet acreage.

** All Plans are for 1955 with the exception of Bulgaria (1953), Czechoslovakia (1953), China (1953), and Hungary (1954). All figures are included in the 1955 total.

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million metric tons. (See Table 4.)* This goal is considered to be unrealistic in that most increases are apparently to be obtained largely through an increase in yields. Several factors -- fertilizer shortages; the lack of a sufficient area of suitable soils; and, in some countries, a general resentment toward the land reform program -- will tend to hold yields down. Production in 1955 is therefore estimated at about 6.1 million metric tons. (See Table 4.)

a. USSR.

As shown in Table 4, the Fifth Five Year Plan (1951-55) of the USSR is directed toward increasing production by about 150 percent over the prewar level. The Plan envisions that gross production will increase during this span of years by 78 percent.** Attainment of this goal is to be achieved mainly by increasing yields through improved agrotechniques.

The Soviet 1955 Plan does not mention specific acreage increases. A speech by A.I. Mikoyan on 9 October 1952, however, does mention in a general way the necessity of increasing the planting of sugar beets throughout the USSR as well as of increasing yields.

To achieve the Soviet 1955 production Plan of 4.4 million metric tons on the basis of present (1952) acreage would require a sugar yield of 33 centners per hectare. This increase would represent a 94-percent increase over the 1952 yield of 17.0 centners per hectare.

The soils of the USSR now utilized for the production of sugar beets are not particularly suited to the growth of the crop but are the best available. It appears likely that Soviet sugar-beet acreage will not tend to expand materially above the 1952 level (1.3 million hectares). It is probable, therefore, that, unless there is an exceptionally favorable combination of weather factors, production of sugar in 1955 will not materially exceed the upper limit of expectancy, or about 2.5 million metric tons. (See Table 4.)

b. European Satellites.

The European Satellites also have plans for increasing the production of sugar primarily through an increase in yields. Planned

* Table 4 follows on p. 12.

** The Plan percentage figure is based on an increase over official 1950 Soviet estimates.

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Table 4

Planned Production of Raw Sugar in the Soviet Bloc including Percentage Comparisons with
Prewar, 1951, and 1952, Productions and Estimated Productions for the Last Years of Respective Plans

Country	Official Planned Production for the Last Years of Respective Plans (Thousand Metric Tons)	Percent of Prewar	Percent of 1951	Percent of 1952	Estimated Production for the Last Years of Respective Plans (Thousand Metric Tons)
USSR	4,400.0 a/	252	211	194	2,500.0
European Satellites					
Poland	1,100.0 a/	125	129	167	900.0
East Germany	888.0 a/	100	118	174	800.0
Czechoslovakia	790.0 b/	122	99	182	900.0 c/
Hungary	280.0 d/	247	82	143	400.0 c/
Rumania	278.0 a/	329	214	337	140.0 c/
Bulgaria	100.0 b/	459	162	249	70.0
Albania	11.0 a/	e/	186	229	6.0
Total European Satellites	3,457.0 f/	131	118	179	3,216.0 f/
Communist China	461.0 b/	115	142	123	400.0
Total Soviet Bloc	8,318.0 f/	174	155	182	6,116.0 f/

a. 1955 Plan.

b. 1953 Plan.

c. Expectancy reduced because of land reform and collectivization.

d. 1954 Plan.

e. No prewar production.

f. These are not true totals, since the individual figures are for different years. They are given, however, in order to indicate aggregate growth.

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production of sugar in the European Satellites, is estimated at about 3.5 million metric tons.* Because of the lack of suitable arable land, fertilizer shortages, a general deterioration in the processing facilities in many of the countries, and a general resentment on the part of the peasants toward the land reform program, it is unlikely that their Plans can be accomplished by 1955. A total annual production of more than 3.2 million metric tons can not be expected during this period. (See Table 4.)

c. Communist China.

Plans for the production of sugar in Communist China do not extend to 1955. The Chinese plan for 1953 calls for an increase in the production of sugar to about 461,000 metric tons (see Table 4). Although production of sugar is being stressed in Communist China with an emphasis upon improving agrotechniques and increasing the processing capacity of mills, it is unlikely that this increase in production can be realized during a 1-year period. The 1953 production is therefore estimated to remain at about the 1952 level (375,000 metric tons). (See Table 4.)

4. Current Utilization.

Of the 4.1 million metric tons of refined sugar produced in the Soviet Bloc countries in 1952 (based on a raw value of 4.6 million metric tons), about 3.4 million metric tons (83 percent) were consumed domestically, about 0.5 million metric tons (12 percent) were exported to non-Bloc countries** and the remaining 0.2 million metric tons (5 percent) were left available as either state reserves or a surplus available for future commitments. (See Table 5.)*** Because of the stringent conditions necessary for storing sugar over a long period of time, the capabilities for storing large quantities probably are limited in most of the Bloc countries, and whatever quantities are held are most likely rotated on a first-in first-out basis so as to minimize storage losses.

* All Plans are for 1955, with the exception of Bulgaria (1953), Czechoslovakia (1953), and Hungary (1954). All Plans are included in the 1955 Plan total.

** Sugar trade among the Soviet Bloc countries has been deducted from the gross trade and included in either the reserves or food supply figures.

*** Table 5 follows on p. 14.

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Table 5

Utilization of Refined Sugar in the Soviet Bloc
Prewar as Compared with 1951-52 and 1952-53

Country	Prewar a/				1951-52				1952-53				Thousand Metric Tons
	Refined Pro- duction b/	Net Trade c/	Reserves or Unknown d/	Supply Available for Food	Refined Pro- duction b/	Net Trade c/	Reserves or Unknown d/	Supply Available for Food	Refined Pro- duction b/	Net Trade c/	Reserves or Unknown d/	Supply Available for Food	
USSR	1,571.3	- 50.5	N.A.	1,520.8	1,877.9	+108.0	N.A.	1,985.9	2,049.3	+ 10.0	N.A.	2,059.4	
European Satellites													
Poland	791.9	-302.7	0	489.2	768.0	-112.0	225.4	430.6	591.0	-181.0	0	410.0	
East Germany	799.2	-413.6	0	385.6	675.0	-317.5	24.5	333.0	460.0	-182.0	100.0	178.0	
Czechoslovakia	583.6	-247.0	30.0	306.6	719.0	-154.0	245.0	320.0	391.0	-100.0	90.0	201.0	
Hungary	102.1	- 11.4	0	90.7	309.0	- 48.0	92.4	168.6	177.0	- 54.0	0	123.0	
Rumania	76.0	- 1.1	0	74.9	117.0	- 30.0	0	87.0	74.0	- 34.0	0	40.0	
Bulgaria	19.6	+ 4.7	0	24.3	56.0	- 3.0	25.5	27.5	36.0	- 5.2	0	30.0	
Albania	0	+ 5.0	0	5.0	5.3	0	0	5.3	4.3	0	0	4.3	
Total European Satellites	2,372.4	-966.1	30.0	1,376.3	2,649.3	-664.5	612.8	1,372.0	1,733.3	-556.2	190.0	987.1	
Communist China	360.0	+650.0 e/	0	1,010.0	292.5	+ 26.0	0	318.5	330.0	+ 58.7	0	388.7	
Total Soviet Bloc	4,303.7	-366.6	30.0	3,907.1	4,819.7	-530.5	612.8	3,676.4	4,112.6	-487.5	190.0	3,435.1	

a. USSR: 1938, postwar boundaries; European Satellites: 1935-39 average, prewar boundaries; China: 1931-37 average, postwar boundaries.
b. Based on a ratio of 1.1 raw to 1 refined.

c. Minus sign (-) indicates a net export; plus sign (+) a net import.

d. These quantities are placed either in a state reserve for strategic purposes and/or in a surplus to be available for future commitments.
e. The net Chinese import of 650,000 metric tons includes 300,000 metric tons which were normally imported by China during the prewar period. It also includes 350,000 metric tons which were produced on the island of Formosa, now a non-Soviet Bloc area, and therefore are considered an import for purposes of this table.

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Except in Communist China, where much sugar is eaten in the raw state, practically all of the sugar in the Soviet Bloc countries is consumed as table refined sugar, and most of the remainder is converted by industry into beverages and confections for human consumption.

Soviet Bloc consumption of sugar during the 1952-53 consumption year* is estimated at somewhat over 3.4 million metric tons, a decrease of 7 percent below the 1951-52 consumption of less than 3.7 million metric tons and 12 percent below the prewar average consumption of about 3.9 million metric tons. (See Table 5.) In terms of net per capita supply this consumption amounts to 4.4 kilograms per year in 1952-53 as compared with 4.8 and 5.2 kilograms per year, respectively, in 1951-52 and in the prewar period. (See Table 6.)** The decrease in the average consumption of sugar in the Soviet Bloc as a whole during the 1952-53 consumption year was the result primarily of the poor harvest in the European Satellites.

The supply of sugar available for food in the USSR during the 1952-53 consumption year is estimated to be about 2.1 million metric tons (9.8 kilograms per capita per year) as compared with the 1951-52 available net supply of approximately 2 million metric tons (9.6 kilograms per capita per year) and the prewar average net supply of 1.5 million metric tons (8.2 kilograms per capita per year). (See Tables 5 and 6.)

The supply of sugar available for food in the European Satellites during the 1952-53 consumption year is estimated to be about 1 million metric tons (10.8 kilograms per capita per year) as compared with the 1951-52 available net supply of about 1.4 million metric tons (15.1 kilograms per capita per year) and the prewar average net supply of approximately 1.4 million metric tons (14.6 kilograms per capita per year). (See Tables 5 and 6.)

Communist China, which has the lowest consumption rate of sugar in the Soviet Bloc, had a net supply estimated at approximately 0.4 million metric tons (0.8 kilograms per capita per year) during the 1951-52 and 1952-53 consumption years as compared with the prewar average net supply of around 1 million metric tons (2.2 kilograms per capita per year). (See Tables 5 and 6.)

* Consumption year extends from 1 July to 30 June.

** Table 6 follows on p. 16.

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Table 6

Per-Capita Consumption of Refined Sugar in the Soviet Bloc
Prewar as Compared with 1951-52 and 1952-53 Consumption Years

Country	Prewar			1951-52		1952-53 ^{a/}	
	Kilograms per Year	Calories per Day ^{b/}	Calories per Day ^{b/}	Kilograms per Year	Calories per Day ^{b/}	Kilograms per Year	Calories per Day ^{b/}
USSR	8.2 ^{c/}	87		9.6	102	9.8	104
European Satellites							
Poland	15.3 ^{b/}	162		17.0	180	16.0	169
East Germany	24.1 ^{d/}	255		18.0	191	9.6	102
Czechoslovakia	21.2 ^{d/}	225		25.0	263	15.5	164
Hungary	10.1 ^{d/}	107		18.0	191	13.1	139
Rumania	4.9 ^{d/}	52		5.4	57	2.5	27
Bulgaria	3.7 ^{d/}	39		3.8	40	4.2	45
Albania	4.7 ^{d/}	50		4.2	45	3.3	35
Total European Satellites	14.6	155		15.1	160	10.8	115
Communist China	2.2 ^{e/}	23		0.7	7	0.8	8
Total Soviet Bloc	5.2	55		4.8	51	4.4	47

a. Preliminary estimate.

b. Based on a caloric content of 3,870 calories per kilogram.

c. Postwar boundaries, 1938 only.

d. Postwar boundaries, 1935-39 average.

e. Postwar boundaries, 1931-37 average.

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The per capita supply of sugar available for food was obtained by dividing the supply available for consumption by the total populations, and are, therefore, not a true reflection of the consumption patterns within the various Soviet Bloc countries. For example, the self-suppliers (producer) of sugar beets consume a larger per capita share of the supply than do the non-self-suppliers since part of the payment to the producer is in kind. As previously mentioned, military and other preferred personnel receive a larger per capita share of the available supply than do the general population. In addition, when sugar is in short supply and placed on the ration list, certain categories of the population are apportioned their ration according to Party and working status. This practice generally leaves a very small ration for the remainder of the population, and such sugar as is available is sold at higher prices.

The small amount of sugar consumed per capita in Soviet Bloc countries can be pointed up by comparison with the 1952 US consumption of sugar of approximately 8 million metric tons, or a per capita consumption of 50 kilograms per year.

One of the principal by-products of production of sugar is molasses, which can be further processed into the production of alcohol. Although grains and potatoes have in the past been the chief sources of production of alcohol in the Soviet Bloc, sugar molasses is growing in importance. The increase in alcohol-processing facilities at many of the sugar factories in the Bloc as well as the construction of additional facilities may indicate a desire by the Communists either to substitute molasses in place of the more valuable grains as a source of alcohol or to increase the over-all alcohol potential of the Bloc by augmenting the present sources of production.

Since sugar is one of the important agricultural export commodities of the Soviet Bloc, a greater emphasis is placed upon maintaining this trade than on providing for the civilian populations. This policy in many instances has resulted in serious shortages of sugar throughout the Bloc, particularly in the European Satellites. This deficit of sugar, which is not a real deficit, has necessitated the need for rationing sugar at a time when considerable quantities of sugar were made available for export purposes.

This situation was evident during the 1952-53 trade year,* when total Soviet Bloc exports of sugar were 91 percent of the total Bloc

* The trade year extends from 1 July to 30 June.

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exports during the 1951-52 trade year (see Table 7),* even though production of sugar in 1952 was 15 percent below the 1951 total.

During the 1951-52 and 1952-53 trade years the Soviet Bloc countries exported an average of 685,000 metric tons of sugar, of which 509,000 metric tons (74 percent) were exported to various non-Bloc countries and 176,000 metric tons (26 percent) were traded within the Bloc. (See Table 7.) During the prewar years the countries now constituting the Bloc exported on an average about 1 million metric tons of sugar each year, with practically the entire trade destined for non-Bloc countries. (See Table 7.)

This prewar trade accounted for 40 percent of the shipments of sugar controlled by the International Sugar Council, which allocated export quotas to the sugar-producing European Satellite countries as well as to the USSR. These countries had well-established markets before the war, and, since the close of hostilities, the Satellite governments particularly have struggled to regain their previous markets and their prewar export status.

During the 1951-52 and 1952-53 trade years, shipments to the USSR accounted for a large part (84 percent and 60 percent, respectively) of the sugar traded within the Soviet Bloc, and the remaining quantities were sent to Communist China.** It is worthy of note that export of sugar to Communist China during the 1952-53 trade year showed a 127-percent increase over 1951-52 exports. This seems to indicate a desire by the Bloc countries to expand their trade with Communist China in order to obtain desirable commodities through the bartering of sugar at favorable exchange rates.

* Table 7 follows on p. 19.

** Imports by the USSR and Communist China were obtained by adding net trade (Table 5) to exports to non-Soviet Bloc countries (Table 7).

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Table 7

Soviet Bloc Exports of Refined Sugar to Non-Soviet Bloc and Soviet Bloc Destinations
 Prewar as Compared with 1951-52 and 1952-53

Country	Prewar ^{a/}				1951-52				1952-53 ^{b/}				Thousand Metric Tons
	Exports to Non-Soviet Bloc Countries		Exports to Soviet Bloc Countries		Exports to Non-Soviet Bloc Countries		Exports to Soviet Bloc Countries		Exports to Non-Soviet Bloc Countries		Exports to Soviet Bloc Countries		
	Total Exports		Total Exports		Total Exports		Total Exports		Total Exports		Total Exports		
USSR	50.5	50.5	0	0	50.0	50.0	0	0	90.0	90.0	0	0	
European Satellites													
Poland	302.7	298.0	4.7		112.0	62.0	50.0	50.0	181.0	141.0	40.0	40.0	
East Germany	413.6	408.6	5.0		317.5	200.5	117.0	117.0	182.0	120.0	62.0	62.0	
Czechoslovakia	247.0	247.0	0		154.0	154.0	0	0	100.0	100.0	0	0	
Hungary	11.4	11.4	0		48.0	40.0	8.0	8.0	54.0	8.5	45.5	45.5	
Rumania	1.1	1.1	0		30.0	18.0	12.0	12.0	34.0	15.8	18.2	18.2	
Bulgaria	0	0	0		3.0	3.0	0	0	5.2	5.2	0	0	
Albania	0	0	0		0	0	0	0	0	0	0	0	
Total European Satellites	975.8	966.1	9.7		714.5	527.5	187.0	187.0	646.2	480.5	165.7	165.7	
Communist China	0	0	0		3.0	3.0	0	0	7.0	7.0	0	0	
Total Soviet Bloc	1,026.3	1,016.6	9.7		717.5	530.5	187.0	187.0	653.2	487.5	165.7	165.7	

a. Estimated 1935-39 average. Postwar boundaries.

b. Preliminary, based on actual shipments through May 1953 and trade commitments for 1952-53.

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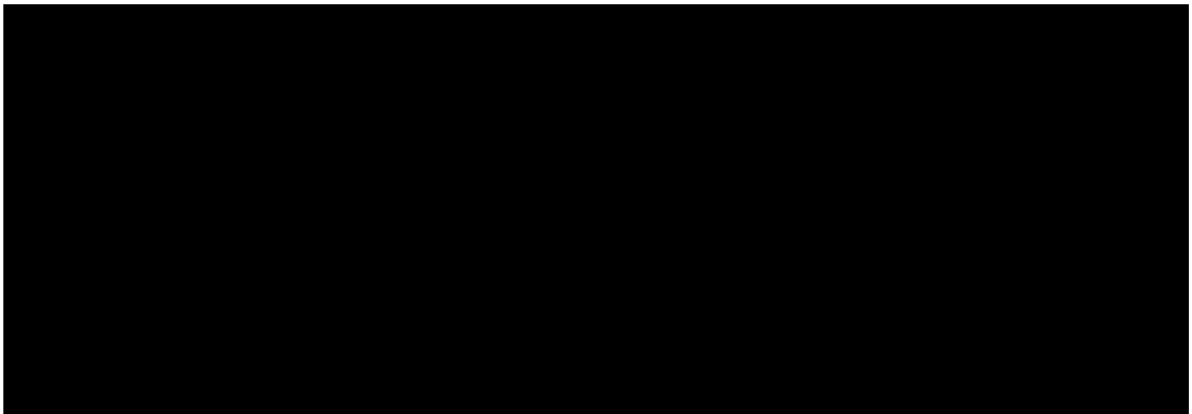
APPENDIX

SOURCES AND EVALUATION OF SOURCES

Except for the sources noted below, all data relating to sugar-beet acreage and production of sugar are based on estimates made by CIA and the Foreign Agricultural Service, US Department of Agriculture. These estimates, in turn, are based upon Soviet statistics collated and used in previously published CIA and FAS studies.

The Soviet Fifth Five Year Plan is based on a report published by the New York Times, 10 Aug 1953. U. Eval. RR B-2.

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The Chinese Communist Plan for 1953 is based on FBIS, 6 Feb 1953, Peking, MCMA, 5 Feb 1953. R. Eval. RR B-2.

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